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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,419	08/04/2003	Naoya Nakanishi	SNY-037	2557

20374 7590 04/03/2007  
KUBOVCIK & KUBOVCIK  
SUITE 710  
900 17TH STREET NW  
WASHINGTON, DC 20006

EXAMINER
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CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/633,419

Applicant(s)

NAKANISHI ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1-4-07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 21, 2007 has been entered.

This Office action addresses claims 1, 3-12 and newly added claim 13. Claims 1 and 3-12, although amended, remain rejected for substantially the reasons of record. Claim 13 is allowed. This action is non-final.

### ***Claim Objections***

2. Claims 4 and 6 objected to because of the following informalities: the claims depend from claim 2, which has been cancelled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa et al (U.S. Patent 6,531,246) in view of Yamazaki et al (U.S. Patent 6,632,538).

Hanafusa teaches a battery comprising a can (1) and having positive and negative terminals (21, 20). The battery can may be made of aluminum (see col. 8, line 26) or stainless steel (col. 6, line 23). As shown in Figure 7, the terminal 21 is in contact with a coating layer comprising the can material (5). As shown in Figure 15, the terminal 20 is coated with a material (17b) comprising nickel, copper, or aluminum (see col. 11, line 45).

Hanafusa does not expressly teach the base material composition of the terminals as recited in claims 1, 3, and 5.

Yamazaki et al. is directed to a lithium secondary battery. In column 2, line 54, the reference teaches the following:

The tab 59 connected to the positive terminal 53 is a metal tab of Al or a stainless steel, and the tab 60 connected to the negative terminal 56 is a metal tab of Cu, Ni or a stainless steel.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use aluminum as the positive terminal and stainless steel as the negative terminal of Hanafusa et al. The disclosure of Yamazaki et al. indicates that these are suitable materials for use as positive and negative terminals. The selection of a known material based on its suitability for its intended use has generally been held to be *prima facie* obvious (MPEP §2144.07). Taking terminal 21 of Hanafusa to be the positive terminal and terminal 20 to be the negative terminal, with regard to claim 3, this would result in an aluminum battery can, a stainless steel negative terminal (20), an aluminum positive terminal (21), and a coating layer (17b) of aluminum (see Fig. 15). Regarding claim 5, the can may be stainless steel, the positive terminal (21) would be aluminum,

the negative terminal (20) would be stainless steel, and the coating layer on the positive terminal (21) would also be stainless steel (see Fig. 7). As such, the subject matter of claims 1-6 would be rendered obvious.

Regarding claim 7, which recites two batteries connected in series, it would be obvious to connect the batteries of Hanafusa in series to increase the voltage of a single battery. As such, the subject matter of claims 7-12 would also be rendered obvious.

#### *Response to Arguments*

4. Applicant's arguments filed March 21, 2007 have been fully considered but they are not persuasive. Regarding the recitation in claim 1 that the coating layer is formed by a cladding connection or plating on the surface of the electrode terminal, these limitations are seen as process limitations that do not impart a structure that is distinct from the references. Thus, the references are still sufficient to meet the limitations. It is noted that in situations involving process limitations in product claims, the burden shifts to Applicant to show an unobvious difference between the structure of the prior art and the structure implied by the claim. See also MPEP 2113.

Additionally, regarding the language in claim 7 that the at least two batteries connected in series are connected so that the negative electrode terminal of one battery contacts the positive electrode terminal of the other battery, this language is not believed to be specific enough to distinguish over the references. It appears that the intent of the language is to recite that the

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batteries are in direct physical contact. However, the claim recites that the terminal "contacts" the other terminal, which also reads on electrical contacting. Such electrical contact would be present in a series connection. Amendment of the claim to incorporate language such as the terminals being in "direct" contact is suggested.

***Allowable Subject Matter***

5. Claim 13 is allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:

Claim 13 recites, among other features, that the battery can is cylindrical and that the coating layer is formed by a cladding connection or plating on the surface of the other terminal. The art of record does not teach or fairly suggest this combination of features as recited in claim 13.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299.

The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the

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organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1745  
March 30, 2007